

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2003/002105

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7 C10L 1/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10L 1/10, 1/32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Korean Patents and applications for inventions since 1975  
Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
eKIPASS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2001-45345 A (H. K. KIM) 05 June 2001 see the whole document	1-14
X	US 6066186 A (SETSUO MATSUMOTO) 23 May 2000 see the whole document	1-14
X	JP 11-82996 A ((NOHARA HIROTSUGU) 26 March 1999 see claims and examples	1-14
X	JP 11-21571 A (HASHIMOTOTORAO) 26 January 1999 see claims 1,2,5 and page3 [0023]-[0026]	1-14
A	KR 1986-2069 B (YONGSONG CHEMICAL CO.) 24 November 1986. see the whole document	1-14

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier application or patent but published on or after the international filing date  
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"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
"&" document member of the same patent family


Date of the actual completion of the international search

13 JULY 2004 (13.07.2004)

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2003/002105

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 2001-45345 A	05.06.2001	NONE	
US 6066186 A	23.05.2000	NONE	
JP 11-82996 A	26.03.1999	US 6296676 B	02.10.2001
		WO 9911741 A	11.03.1999
		CA 2302772 A	11.03.1999
		EP 1018537 A	12.07.2000
JP 11-21571 A	26.01.1999	NONE	
KR 1986-2069 B	24.11.1986	NONE	